

ABSTRACT OF THE DISCLOSURE

A path network and a path network operation method capable of dealing with an abrupt traffic variation by realizing fast path bandwidth increase are disclosed. A path network is operated by transmitting path signals from a transmitting node to a receiving node through the working paths and the protection paths, and converting a protection path into a working path temporarily in order to increase a bandwidth of the working paths when a bandwidth increase request occurs in the path network. The transmitting node and the receiving node can convert a protection path into a working path by using the automatic path conversion information contained in the path overhead attached to the path signals.